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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/343,092	06/30/1999	HIDEO SAMURA	50059-048	7482

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EXAMINER

DICKENS, CHARLENE

ART UNIT PAPER NUMBER

2855

DATE MAILED: 08/27/2002

Please find below and/or attached an Office communication concerning this application or proceeding.



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09/343,092

SERIAL NUMBER

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FIRST NAMED APPLICANT

ATTORNEY DOCKET NO.

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ART UNIT

PAPER NUMBER

23

DATE MAILED

Below is a communication from the EXAMINER in charge of this application

COMMISSIONER OF PATENTS AND TRADEMARKS

ADVISORY ACTION

☐ THE PERIOD FOR RESPONSE:

- a) ☐ is extended to run _____ or continues to run _____ from the date of the final rejection
- b) ☐ expires three months from the date of the final rejection or as of the mailing date of this Advisory Action, whichever is later. In no event however, will the statutory period for the response expire later than six months from the date of the final rejection.

Any extension of time must be obtained by filing a petition under 37 CFR 1.136(a), the proposed response and the appropriate fee. The date on which the response, the petition, and the fee have been filed is the date of the response and also the date for the purposes of determining the period of extension and the corresponding amount of the fee. Any extension fee pursuant to 37 CFR 1.17 will be calculated from the date of the originally set shortened statutory period for response or as set forth in b) above.

☐ Appellant's Brief is due in accordance with 37 CFR 1.192(a).

☒ Applicant's response to the final rejection, filed 7-26-02 has been considered with the following effect, but it is not deemed to place the application in condition for allowance:

1. ☐ The proposed amendments to the claim and/or specification will not be entered and the final rejection stands because:

- a. ☐ There is no convincing showing under 37 CFR 1.116(b) why the proposed amendment is necessary and was not earlier presented.
- b. ☐ They raise new issues that would require further consideration and/or search. (See Note).
- c. ☐ They raise the issue of new matter. (See Note).
- d. ☐ They are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal.
- e. ☐ They present additional claims without cancelling a corresponding number of finally rejected claims.

NOTE:

2. ☐ Newly proposed or amended claims _____ would be allowed if submitted in a separately filed amendment cancelling the non-allowable claims.

3. ☒ Upon the filing an appeal, the proposed amendment ☒ will be entered ☐ will not be entered and the status of the claims will be as follows:

Claims allowed: _____

Claims objected to: _____

Claims rejected: 4-7, 11 & 12

However;

☐ Applicant's response has overcome the following rejection(s): _____

4. ☐ The affidavit, exhibit or request for reconsideration has been considered but does not overcome the rejection because _____

5. ☐ The affidavit or exhibit will not be considered because applicant has not shown good and sufficient reasons why it was not earlier presented.

☐ The proposed drawing correction ☐ has ☐ has not been approved by the examiner.

☒ Other The 37 CFR 1.116 filed 7/26/02 now places the 4/25/02 Appeal Brief in full compliance.

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DETAILED ACTION

This is the second Office Action for serial number 09/236,092, Head For Ink-Jet Printer Having Piezoelectric Elements Provided For Each Nozzle, filed 1/25/99.

Election/Restriction

1. Newly submitted claims 3 and 8-10 are directed to an invention that is independent or distinct from the invention originally claimed for the following reasons: because the ink jet head can be made by another and materially different process (MPEP 806.05(f)). In the instant case the head can be made from etching, drilling or punching

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claims 3 and 8-10 are withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 4-7, 11 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shimada in view of Usui and JP 10-86365.

Shimada discloses the claimed invention essentially, including: ink nozzles 210, ink passages 204, ink chambers 203 and piezoelectric element 208.

However, Shimada does not disclose specific dimensions, i.e., fineness, for the ink passages, the ink chambers or the ink nozzles; plural laminated ceramic substrates; or a thin film of ferroelectric substance. Usui discloses ink passages 10 are fine as compared with ink chambers 4 and tapered ink nozzles 28 are fine as compared with the ink passages 10 and the lamination of plural ceramic substrates, i.e., silicon, (7, 8, 11) (col. 7, lines 63-67 - col. 8, lines 1-46) for the purpose of increasing the mechanical strength of the flow path forming member in an ink jet head. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have ink passages are fine as compared with ink chambers and tapered ink nozzles are fine as compared with the ink passages and the

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lamination of plural ceramic substrates in Shimada as taught by Usui for the purpose of increasing the mechanical strength of the flow path forming member in an ink jet head.

4. JP 10-86365 discloses a piezoelectric element of ferroelectric substance (abstract) for the purpose of making handling easier and increasing the surface smoothness of ferroelectric substances. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have a piezoelectric element of ferroelectric substance in the modified Shimada as taught by JP 10-86365 for the purpose of making handling easier and increasing the surface smoothness of ferroelectric substances.

Response to Arguments

5. Applicant's arguments filed 11/20/00 have been fully considered and are deemed to be addressed by the rejections given above.

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

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A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Contact Information

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Dickens whose telephone number is (703) 305-7047. Any inquiry of a general nature or relating to the status of this application should be directed to the receptionist whose telephone number is (703) 308-0956. The fax numbers are (703) 305-3431 and (703) 305-3432.



cd/dickens
December 26, 2000



**HARSHAD PATEL
PRIMARY EXAMINER**